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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,538	11/30/2001	John R. Fredlund	83539DAN	9143

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EXAMINER

MENBERU, BENIYAM

ART UNIT PAPER NUMBER

2625

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/020,538	FREDLUND ET AL.	
	Examiner	Art Unit	
	Beniyam Menberu	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-13, 15-18 and 24-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-13, 15-18 and 24-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Arguments***

1. Applicant's arguments, see Remarks, filed August 9, 2006, with respect to the rejection(s) of claim(s) 2-13, 15-18, and 24-34 under U.S. Patent Number 6,707,927 to Kita et al have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 5530759 to Braudaway et al in view of U.S. Patent No. 6304345 to Patton et al.

***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the reference numbers are not clear for "computer", "printer", and the labeling for reference 19 is not very clear in Figure 1. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-6, 8, 9, 10, 11, 13, 15, 16, 18, 24, 25, 26, 28, 30, 31, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5530759 to Braudaway et al in view of U.S. Patent No. 6304345 to Patton et al.

Regarding claims 8 and 26, Braudaway et al disclose a method of providing human visible information on an image (column 2, lines 6-11), the method comprising the steps of:

selecting a location on an image for human visible information (column 5, lines 6-23; The non-transparent locations determine the location where the pixel will be changed.);

analyzing pixels of the image at said location that will be used to create the human visible information to determine pixel values of said analyzed pixels (column 5, lines 6-67; column 6, lines 1-16);

adjusting the pixel values of said analyzed pixels by a predetermined amount (column 5, lines 6-15, lines 33-67; column 6, lines 1-6); and

printing the image with said human visible information thereon (column 4, lines 45-50), wherein said human visible information is presented with pixel values which are different from pixel values of an image area which surrounds said human visible

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information or from the pixel values that they have replaced (column 5, lines 6-24; The transparent area pixels will be different from the non-transparent pixel areas.). However Braudaway et al does not disclose wherein said selecting step comprises the step of determining an optimum location for said human visible information based on a spatial analysis of said image, and wherein the human visible information is not obtrusive.

Patton et al disclose wherein said selecting step comprises the step of determining an optimum location for said human visible information based on a spatial analysis of said image (Figure 1, reference 14; column 4, lines 50-55; column 5, lines 20-33; column 9, lines 20-25; The positioning of reference 14 with respect to areas of image 12 is taught here by Patton et al which reads on location based on spatial analysis), and wherein the human visible information is not obtrusive (column 4, lines 52-53; column 9, lines 23-25).

Braudaway et al and Patton et al are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the information placing system of Patton et al with the system of Braudaway et al in view of Patton et al to implement placing of visible information in specific area of image unobtrusively.

The motivation to combine the reference is clear because Patton et al provide easy way for detecting embedding information in an image (column 2, lines 50-54).

With respect to dependent claims 2 and 24, Braudaway teaches in (col. 5, lines 27-28, the conversion is preferably accomplished by means of a look-up table, fig. 2,

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203, 206, and the amount of pixels can be chosen, increased or decreased: col. 5, lines 9-14, pixel values 0-127 are to be darkened and values from 129-255 are to be brightened) showing that the values of the analyzed pixels can be adjusted) a method according to claims 8 and 26 respectively, wherein said adjusting step comprises increasing the pixel values of said analyzed pixels.

With respect to dependent claims 3 and 25, Braudaway teaches in (col. 5, lines 27-28, the conversion is preferably accomplished by means of a look-up table, fig. 2, 203, 206, and the amount of pixels can be chosen, increased or decreased: col. 5, lines 9-14, pixel values 0-127 are to be darkened and values from 129-255 are to be brightened) showing that the values of the analyzed pixels can be adjusted) a method according to claims 8 and 26 respectively, wherein said adjusting step comprises decreasing the pixel values of said analyzed pixels.

With respect to dependent claim 4, Braudaway teaches in (col. 4, lines 64-67, three eight-bit samples may describe one of 256 levels of red, one of 256 levels of green, and one of 256 levels of blue for a color image; col. 5, line 66, fig. 2, 214, the final scale factor used to scale the pixel is calculated) a method according to claim 8, wherein said adjusting step comprises changing the pixel value (col. 5, line 30, for a color image, the output of block 202 fig. 2, is the set of linearized R, G, B values of the pixel) of at least one color channel of said analyzed pixels.

With respect to dependent claims 5 and 31, Braudaway teaches in (col. 7 lines 1-8, for color images, the watermarking procedure is essentially the same, except the linear brightness of each pixel must be extracted from some combination) a method

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according to claims 8 and 26 respectively, wherein said adjusting step comprises adjusting the pixel values of said analyzed pixels by different amounts (col. 5, line 30, for a color image, the output of block 202 fig. 2, is the set of linearized R, G, B values of the pixel) in each color channel.

With respect to dependent claims 6 and 32, Braudaway teaches in (col. 5, lines 24-25, in fig. 2, 202, the original image pixels are converted to a linear brightness scale 209) a method according to claims 8 and 26, wherein said adjusting step comprises adjusting the pixel values of said analyzed pixels by different amounts according to a value of an original pixel.

Regarding claims 9, 16, and 27, Patton et al discloses a method according to claims 8, 15, and 26 respectively, wherein said optimum location of said image for said human visible information is at least one of an area without high frequency detail on said image, an area of repetitive detail in the image, and a dark portion area of the image (column 9, lines 21-24; Figure 1, 14; The information 14 is placed in a low detail area ("non-pictorial area")).

Regarding claims 10 and 34, Patton et al discloses a method according to claims 8 and 26 respectively, wherein said optimum location of said image for said human visible information is at least an area where faces or flesh are not detected (column 9, lines 21-24; Figure 1, 14; The information 14 is placed in a "non-pictorial area" which implies where there are no pictorial information. Since the face qualifies as a pictorial information area, the information 14 will not be placed in that area. ).

With respect to dependent claims 11 and 28, Braudaway teaches in (fig. 1, 112, 116 that the image is processed, so this step means a portion of the image is been analyzed) a method according to claims 8 and 26 respectively, wherein said analyzing step comprises analyzing a portion of the image.

With respect to dependent claims 13, 18, and 30, Braudaway teaches in (col. 4, lines 46-47, the system can then display, "in this embodiment col. 4, lines 52-53, the watermark image is a monochrome image, meaning it is human visible and human detectable"; the images on a display device 124 or print the images), a method/system according to claims 8, 15, and 26 respectively, wherein said human visible information is human readable and/or human detectable.

Regarding claim 15, Braudaway et al disclose a system for providing human visible information on an image, the system comprising:

a computer device adapted to analyze pixels of an image that will be used create human visible information to determine pixel values of said analyzed pixels, said computer device being further adapted to adjust the analyzed pixel values of said pixels by a predetermined amount (column 4, lines 10-12, 30-37; column 5, lines 6-67; column 6, lines 1-16; column 5, lines 6-15, lines 33-67; column 6, lines 1-6 ); and

a printing device adapted to print the image with said human visible information thereon(column 4, lines 45-50), wherein said human visible information is printed with pixel values that differ from pixel values of an image area which surrounds the human visible information or from pixel values that they have replaced (column 5, lines 6-24; The transparent area pixels will be different from the non-transparent pixel areas.).



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However Braudaway et al does not disclose wherein said computer device is further adapted to determine an optimum location for said human visible information based on a spatial analysis of said image and that the human visible information is not obtrusive

Patton et al discloses wherein said computer device is further adapted to determine an optimum location for said human visible information based on a spatial analysis of said image (Figure 1, reference 14; column 4, lines 50-55; column 5, lines 20-33; column 9, lines 20-25; The positioning of reference 14 with respect to areas of image 12 is taught here by Patton et al which reads on location based on spatial analysis) and that the human visible information is not obtrusive (column 4, lines 52-53; column 9, lines 23-25).

Braudaway et al and Patton et al are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the information placing system of Patton et al with the system of Braudaway et al in view of Patton et al to implement placing of visible information in specific area of image unobtrusively.

The motivation to combine the reference is clear because Patton et al provide easy way for detecting embedding information in an image (column 2, lines 50-54).

5. Claims 7 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braudaway et al in view of Patton et al as applied to claim 8 above.

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Considering dependent claims 7 and 33, Braudaway discloses (col. 5, lines 6-15, pixel values 0-127 are to be darkened and values from 129-255 are to be brightened) showing that the values of the analyzed pixels can be adjusted.

However, Braudaway fails to specifically disclose adjusting the pixel values of said analyzed pixels by less than 10% of full scale.

As is obvious from the above discussion that the analyzed pixel values can be adjusted by any desired amount of the scale. It would have been obvious to one of ordinary skill in the art to select less than 10% of the full scale because this would not significantly deteriorate the image.

6. Claims 12, 17, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braudaway (U. S. Patent No. 5,530,759) in view of U.S. Patent No. 6304345 to Patton et al further in view of Hatakenaka et al (U.S. Patent No. 6,563,542).

With respect to dependent claims 12, 17, and 29, Braudaway does not teach, wherein said human visible information is at least one of a number, a URL, a bar code, APS IX frame titles, text graphics, a password, a company logo and a crop box on front of the print.

Hatakenaka discloses in Figs. 6A, 6B, 6C, 6D and 7 that the human visible information can at least be a number 'date' on front of a print.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include numbers for Braudaway's watermark information.

The motivation would be for identification purpose (col. 2, line 47).

***Other Prior Art Cited***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application Publication Pub. No. US 2005/0058318 A1 to Rhoads discloses method/device for placing data in images so that data is not visible.

U.S. Patent Application Publication Pub. No. US 2004/0036924 A1 to Ihara discloses image processing method/device for generating composite image.

U.S. Patent No. 5905819 to Daly discloses method of generating composite image.

U.S. Patent No. 6590996 to Reed et al disclose color watermarking.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Patent Examiner**

Beniyam Menberu

**BM**

10/26/2006



**KIMBERLY WILLIAMS  
SUPERVISORY PATENT EXAMINER**